

REMARKS

This preliminary amendment is being offered to better elucidate Applicants' invention in American claim format without adding new matter. Entry of this amendment by the Examiner is respectfully requested. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached paper is captioned "Version with Markings to Show Changes Made."

Authorization is given to charge payment of any additional fees required, or credit any overpayment, to Deposit Acct. 13-4213.

Respectfully submitted,

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Version with Markings to Show Changes Made

1. (Amended) A process for the preparation of an aqueous dispersion of an anionic polyurethane in which initially a tertiary aminofunctional acrylic monomer of formula I:



wherein

R^1 , R^2 , R^3 and R^4 are organic groups which have no reactivity towards the double bond or the tertiary amine function,

is used as neutralizing agent for pendant carboxylic acid groups in dispersions of a polyurethane or a polyurethane-polyacrylate, whereafter the unsaturated monomers undergo in situ an addition

[polymerisation] polymerization, [optionally together with other unsaturated monomers,]

[characterized in that] wherein the aqueous dispersion of the anionic polyurethane is prepared by the steps of

- [-] preparing [preparation of] an isocyanate functional anionic polyurethane prepolymer, optionally in the presence of vinylic monomers
- [-] mixing [of] the isocyanate terminated anionic polyurethane prepolymer with a tertiary-amino functional unsaturated monomer and optionally other vinylic monomers
- [-] followed by dispersing [dispersion] of the obtained mixture into water, and chain extension of the polyurethane prepolymer with an active hydrogen compound during or after the dispersion in water,
- [-] initiating radical [polymerisation] polymerization of the vinylic monomers, including the tertiary amino functional unsaturated monomers.

2. (Amended) A process according to claim 1, in which the isocyanate terminated prepolymer is reacted with 0-100% of a stoichiometric amount of a hydroxy functional unsaturated monomer before the dispersion of water.

3. (Amended) A process according to claim 1 [or 2], in which the tertiary amine functional acrylic oligomer or polymer is formed during the process by radical [polymerisation] polymerization of tertiary amine functional unsaturated monomers.

4. (Amended) A process according to claim 1 [to 3], in which the tertiary amine functional unsaturated monomers react together with other vinylic monomers during the radical [polymerisation] polymerization to obtain a tertiary amine functional co-polymer.

5. (Amended) A process according to claim 1 [any of the preceding claims], wherein the tertiary amine functional unsaturated monomer is a dimethylaminoalkyl acrylate, a dialkylaminoalkyl methacrylate, a dialkylaminoalkoxy acrylate and/or a dialkyl-aminoalkoxy methacrylate.

6. (Amended) A process according to claim 1 [any of the preceding claims], wherein the tertiary amine functional unsaturated monomer is [preferably] dimethylaminoethyl acrylate, dimethylaminoethyl methacrylate, diethylaminoethyl acrylate, diethylaminoethyl methacrylate, or 2-(diethylamino) ethanol vinylether [and the like].

7. (Amended) A process according to claim 1 [any of the preceding claims], wherein the tertiary amine functional unsaturated monomer is present in a ratio to the anionic residues to be neutralized in the polyurethane prepolymer from between approximately 0.3 to 2 [and preferably from 0.7 to 1.5].

8. (Amended) A process according to claim 1 [any of the preceding claims], wherein the anionic group in the polyurethane or in the polyurethane/polyacrylate hybrid is a carboxyl, a sulphonic, a sulphate and/or a phosphate group[and is preferably a carboxyl group].

9. (Amended) A process according to claim 1 [any of the preceding claims], wherein the amount of carboxylic acid functions in the isocyanate functional polyurethane prepolymer is from approximately 1 to 15% [and preferably from 2 to 10%].

10. (Amended) A process according to claim 2 [and any further preceding claim] wherein the hydroxy functional unsaturated monomer is a hydroxy functional acrylate or methacrylate [such as] selected from the group consisting of hydroxyethyl acrylate, hydroxyethyl methacrylate, hydroxy-propyl acrylate, hydroxypropyl methacrylate, hydroxybutyl acrylate, hydroxybutyl methacrylate, and hydroxy-polyester acrylate or methacrylate.

11. (Amended) A process according to claim 1 [any of the preceding claims], wherein the other vinylic monomers are selected from acrylic or methacrylic alkyl esters[, optionally functionalized with hydroxy, quaternary amines or halogen groups, acrylo-nitrile, styrene, esters and ethers of vinyl alcohol].

12. (Amended) A process according to claim 11 [and any of the preceding claims], wherein the other vinylic monomers are present in an amount of approximately 0 to 90% [and preferably from 0 to 60%].

13. (Amended) A process according to claim 1 [any of the preceding claims], wherein the polyurethane and/or the acrylic monomers contain additional functional groups [which may be] selected from the group consisting of polyalkoxy functions with a large concentration of ethoxy functions, [may be] tertiary amine or quaternary amine functions, perfluor functions, incorporated silicon functions, hydrazide functions or hydrazone functions, ketone, acetoacetate, hydroxy, methylol, amide, glycidyl, and ureido or aldehyde functions.

14. (Amended) A process according to claim 1 [any of the preceding claims], wherein a conventional non-ionic, anionic or cationic surfactant[s] is applied during the dispersion of the prepolymer solution in water[, which is preferably a compound based on a long-chain dialkyl sodium sulpho-succinate, arylalkyl-polyethoxyalkyl derivatives, highly ethoxylated polyurethane derivative and the like].

15. (Amended) A dispersion [Dispersions] prepared by [a] the process [described in] of claim 1 [the preceding claims].

16. (Amended) A coating or film obtained from a dispersion prepared by [a] the process of claim 1 [as claimed in any of the claims 1 to 15].